

Electrochemical determination of lipoic acid

Ziyatdinova G., Budnikov G., Pogorel'tsev V.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

Procedures for determining lipoic acid by voltammetry and coulometric titration with electrogenerated halogens using the biamperometric indication of the titration end-point were developed. Possible mechanisms of lipoic acid oxidation with electrogenerated halogens are discussed. Microgram amounts of lipoic acid were determined in model solutions with an RSD of 1-2%. The analytical range of lipoic acid found by voltammetry at a glassy-carbon electrode lies between 1.15×10^{-5} and 1.73×10^{-4} M. The detection limit for lipoic acid is 5.75×10^{-6} M.

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